

Anthropometric Characteristics of Elite Junior Male Rowers.

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Introduction

During the preparation of the junior regional rowing team (Region of Valencia, Spain), anthropometric details of 18 junior male rowers aged 17.83 ± 3.83 years were gathered. Anthropometric evaluation has frequently been used with junior rowers (Bourgois, J et al., 2001) to analyse their progress to the senior category. However, there is still limited information on current parameters.

Methods

The rowers underwent anthropometric evaluation using the techniques based on Carter, 1976 and The International Society for the Advancement of Kinanthropometry (ISAK) profile. These rowers were evaluated in order to obtain a current anthropometric profile for elite junior male rowers. The descriptive study was designed to identify the current evaluation of elite male rowers in Spain, and 18 rowers from the team took part in the study. The equipment used included Holtain skinfold callipers, Holtain bone diameter callipers, scales, height rod and anthropometric tape. Each rower was evaluated for weight, height, BMI (Kg/m^2), muscle mass (Lee et al. 2000), fat mass (Withers et al. 1987), bone mass (Rocha, 1974), residual mass and somatotype (Carter and Heath, 1990). After the evaluations, a statistical analysis was carried out using SPSS 13.0 to compare rower data.

Results and Discussion

The results showed that the weight was (76.47 ± 9.42 kg), height (178.93 ± 7.66 cm), BMI (23.78 ± 1.42 kg/T^2), muscle mass (34.16 ± 2.74 kg), fat mass (12.06 ± 3.05), bone mass (12.56 ± 1.32) and residual mass (17.67 ± 3.49). Improved understanding of the anthropometric evaluation of junior rowers is very important for establishing specific rowing training guidelines.

Age	Height (cm)	Weight (Kg)	BMI (kg/m^2)	% bone	% fat	% muscle	Endomorphy	Mesomorphy	Ectomorphy
17.8 ± 3.8	178.9 ± 7.6	76.4 ± 9.4	23.7 ± 1.4	16.4 ± 0.9	15.6 ± 2.5	44.9 ± 2.2	$3,2 \pm 0,7$	$3,9 \pm 0,7$	2.3 ± 0.5

Table 1. Average Anthropometric data of Elite Junior Male Rowers.

The dispersion scale indicator of somatotype is 2.6. The distance of dispersion of somatotype average respect to the data of Olimpic Games of Sidney 2000 is 3.2. The distance of dispersion of somatotype average respect to the data of National Team Spain Junior (2006) is 1.9.

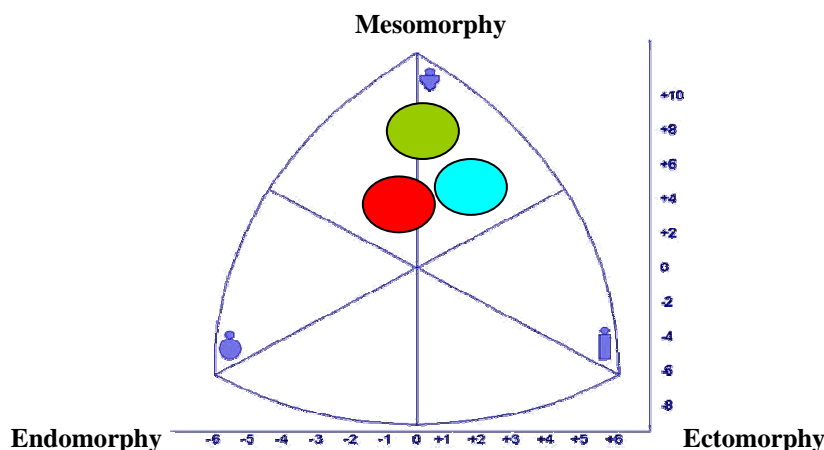


Figure 1. Somatotype distribution and comparative with other groups.

- National Team Spain Junior (2006)
- Regional Team Valencia Junior, Spain (2007)
- JJ.OO Sidney 2000. (Ackland, 2001)

Conclusion

The results indicate that the rowers of regional level present somatotype but remote that the national elite of the profile of maximum international performance.

The anthropometric evaluation is a basic tool for the control sport performance, as well as of possible indicator of the himself, through the evolution of somatotype of the sportsman.

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